

FT0AN-D

TEST SET, TAPE RECORDER

1. GENERAL. This procurement requires a tape recorder test set capable of indicating satisfactory, marginal and unsatisfactory operation of tape recorders with a frequency response of 50 Hz to 16 kHz.

2. CLASSIFICATION. Type II, Class 5, Style E, Color R for in accordance with MIL-T-28800 for shipboard applications except the vibration and shock pulse requirements are not invoked.

3. MEASUREMENT REQUIREMENTS. The equipment shall be capable of operation within the minimum parameters and accuracies specified herein. The equipment shall be capable of injecting a composite test signal into the unit under test and analyzing the unit's reproduction of the signal for frequency, distortion, flutter, and signal-to-noise ratio. The equipment shall provide separate outputs for testing via microphone or direct line connection.

3.1 Composite test signal. The equipment shall allow the operator to select any of at least three composite signals as follows. All composite signals shall include a 1 kHz reference component.

- a. 200 Hz, 1 kHz, 4 kHz
- b. 100 Hz, 1 kHz, 8 kHz
- c. 50 Hz, 1 kHz, 16 kHz

3.1.1 Level. Microphone output: 100 μ V to 1 mVrms continuously adjustable. Line output: 100 mV to 1 Vrms continuously adjustable. Nominal output impedances shall be 1 ohm for microphone and 600 ohms for line.

3.1.2 Distortion. Test signal distortion shall be less than 0.1% for second and third harmonics.

3.2 Input Characteristics.

3.2.1 Input level. 100 mV to 1 Vrms. Maximum input: 25 Vrms, 200 Vdc, or 50V pk individually.

3.2.2 Input impedance. 100 kilohms shunted by 100 pF.

3.2.3 Test modes. The equipment shall test and display the following characteristics of the input signal. All characteristics are measured relative to the 1 kHz reference unless stated otherwise.

3.2.3.1 Low frequency. Measures dB level at lower band-limit relative to level of reference.

3.2.3.2 High frequency. Measures dB level at upper band-limit relative to level of reference.

3.2.3.3 Distortion. 1 to 3% of the third harmonic.

3.2.3.4 Flutter. Range: 0.15 to 3%. Bandwidth: 0.5 Hz to 100 Hz unweighted and damped.

3.2.3.5 Signal-to-noise. Range: -20 to -50 dB.

3.3 Connectors. BNC

3.4 Display. Analog or digital. The display shall have adequate scale resolution or digits to resolve the required measurements to the accuracies specified.

4. GENERAL REQUIREMENTS.

4.1 Power source. MIL-T-28800 nominal power source requirements are invoked. Maximum power consumption: 5W.

4.2 Weight. 10 kg (22 lb) maximum.

4.3 Lithium batteries. Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.